

Aviation News

MCGRAW-HILL PUBLISHING COMPANY, INC.

OCT. 28, 1946

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From Planes to Picket Line: Symbol of last week's walkout of TWA pilots, who want fatter pay envelopes for four-engine operation, is this little group of Air Line Pilot Association members, trudging in methodical circles before the airline's maintenance hangars at Kansas City. Picture was taken the first day of the strike. Next morning the nattily-uniformed pickets failed to reappear, and shop workers and maintenance men who had refused to cross the line were back at work. See story on page 7. (Press Assn. Photo)



American Airlines DC-4's

The 3000 psi hydraulic system of the DC-4's operated by American Airlines has the Vickers Units shown below.

The Vickers Pulse Type Pump has a maximum recommended operating pressure of 3000 psi and maximum recommended speed of 3750 rpm at which its output is 13.3 horsepower. As the pump weighs only 6.6 lb. it has the exceptionally low weight ratio of 0.51 lb. per hp. Its volumetric efficiency is 94% and the overall efficiency of 88% is exceptionally high for 3000 psi units.

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Vickers Bulletin 45-41 gives additional information about the most complete line of 3000 psi hydraulic equipment for aircraft.

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THE AVIATION NEWS

Washington Observer



PAA'S DOMESTIC BUILD-UP—Pan American's second and preceding five-hour transoceanic air mail service next year will have new Republic Rainbows with the public's attention. But PAA don't title on the fact that it doesn't have the routes. The copy made no friends for PAA at CAB. Actually, CAB "locked" PAA to zone down its routes after appearance of the first insertion. CAB feels it has been put on the spot. In the past such strategy on the part of a headliner has been followed frequently by adverse decisions.

WHAT WILL JUSTICE DO?—Associate Attorney General Birge and other Anti-Treasury are wondering: Are they obliged to intervene on PAA's behalf in its domestic route case? John Tripp's Washington operators point out quietly, and with some insistence, that the department in its report to Congress on international aviation recommended domestic routes for Pan American if domestic companies were given international routes. Although CAB has ruled Justice to follow through, legal liaison districts never be dissolved if the department will.

WHAT IS AN AIRLINE?—The certified carriers are fuming over the advertising campaign of non-scheduled services. As CAB Chairman Landis pointed out at the National Aviation Council, unaffiliated operators are not airlines, in the eyes of CAB, sole certifying agency. How it is public to be told the difference, so they can understand! At ATA President Emory Land suggests that each unaffiliated airline president write letter to the editors of all newspapers along their routes, emphasizing how non-scheduled and scheduled companies differ.

BILLION DOLLARS A YEAR—Under-secretary of State Clayton's forecast that within a few years Americans will be spending a billion and 1/2 half dollars annually on travel abroad added luster to the non-scheduled lines' position for air transportation. It was hardly two years ago that non-scheduled executives were telling newsmen that they had nothing to fear from the future air transport industry. What they said the nation now has to reflect in that the case would never have arisen if they had already been in air transportation when the Civil Aeronautics Act went into effect.

UNIFICATION WINS AT CLINIC—The resolution favoring unification of the armed services received at the National Aviation Clinic had its special laurels last week. Some weeks before the Clinic, Assistant

Secretary of War for Air, W. Stuart Symington, was invited to appear as a speaker. He accepted on condition that he could choose his own subject—unification. Clinic authorities mainly back-tracked on the somewhat surprising theory that controversial questions should not come up on the program. Symington did not appear, but the resolution was duly presented to the Clinic by the official resolution committee and went through. * * *

RESEARCH BOARD SURPRISE—Army and Navy, which are financing or are concerned in most Government-supported research, were surprised by formation of the Presidential Research Board, headed by John J. Stackhouse, director of the Office of War Mobilization and Reconstruction. The services were not advised in advance, although both—at least in NACA—are represented on the Board. The Board is not an executive subcommittee for the National Science Foundation which was proposed and defeated last session, but it will study the need for coordination in contract testing so that industrial research facilities and personnel can be used to best advantage. * * *

SHOW POLICY STILL FELLING—The solid sounding announcement that the Aeronomical Show Council (composed of most private and Government bodies in aviation) has adopted a policy on air shows, meet, races, and exhibitions seems remote here. In essence, the "policy" adopted was the decision to permit a three-man committee to establish standards and rules for encouraging and prosecuting air shows. These rules will control the policy. Committee is William P. MacCloskey, general counsel of the National Aeronautic Association; John E. P. Morgan, executive director, Aircraft Industries Association; and Lowell H. Swanson, executive vice-president, NAAA.

MR. ARNOLD WARNS THE AIRLINES—ATA's vice-president for operations, Milton W. Arnold, has told the airlines they are short-sighted in their unwillingness to schedule regular flights over a third New York terminal—Flagstaff-Bonanza Airports—to ease congestion in the area this winter. Traffic executives apparently still underestimate the crucial problems they will meet during instrument conditions, with this year's unprecedented traffic. An additional known rule of 15 minutes for passenger should be preferred over cancellation of from 10 to 50 percent more flights than at present, Arnold says. Furthermore, if the industry fails to make this sacrifice, it may take the consequences of any restrictions ordered by CAA



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Editorial Office: In addition to Hanover, Pa., the office is located in New York City, Chicago, Los Angeles, San Francisco, Seattle, Atlanta, Boston, Miami, and Honolulu. The editorial office is located in the Hotel Pennsylvania, New York City. The editorial office in Chicago is located in the Hotel Sherman, Chicago. The editorial office in Los Angeles is located in the Hotel Roosevelt, Los Angeles. The editorial office in San Francisco is located in the Hotel InterContinental, San Francisco. The editorial office in Seattle is located in the Hotel Columbia, Seattle. The editorial office in Atlanta is located in the Hotel Georgia, Atlanta. The editorial office in Boston is located in the Hotel Commonwealth, Boston. The editorial office in Miami is located in the Hotel Miami Beach, Miami Beach. The editorial office in Honolulu is located in the Hotel Moana, Honolulu. The editorial office in Honolulu is located in the Hotel Moana, Honolulu. The editorial office in Honolulu is located in the Hotel Moana, Honolulu.

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News Digest

DOMESTIC

CAA will open 45 new district offices to administer the federal airport program.

Curta-Wright Corp.'s airplane division at Columbus has been awarded subcontract totaling nearly \$16,000,000 by Republic Aviation for major assemblies and parts for F-105 fighters and B-57 bomber transports.

William M. Fairchild has resigned as chairman of the board of the Fairchild Engine and Airplane Corp. He indicated he had an immediate plan for other activity in the aircraft industry.

Brig. Gen. Marvin E. Green, commandant of the AAF Institute of Technology was killed in the crash of his F-100 jet fighter near Brooksville, Ky.

SCAF Wing Commander R. C. Hallare was awarded the Coll. Thucius Thorlow navigation award by the Institute of Navigation for his work on polar navigation.

Mayo has awarded Bendix Radar Division a contract to produce a minimum of 36 ground control approach systems and other equipment.

Victorville, Calif., Army Air Field Auxiliary No. 2 has been sold to the Rockwell Aircraft Co., Van Nuys, Calif., for \$10,000 by WAA.

FINANCIAL

Foreign Liquidation Commission reports sales of surplus aircraft and parts overseas for August of \$101,486,000, which compares favorably with \$107,525,000 in August, 1957.

There were 262 aircraft. Total value of aircraft as of Aug. 31 were \$42,337,014 at spot, original cost \$241,731,185.

Northrop Aircraft Inc. reported a consolidated net loss of \$25,261 for the year ended July 31, 1948, as compared to a net income of \$147,561 for 1947.

Farmland Aircraft Ltd. of Montreal reported a net loss of \$613,587 for the year ending June 30, 1946, against a net profit for 1945 of \$160,000.

FOREIGN

Establishment of an American Royal Australian Air Force of 15,000 men has been proposed by the Australian Parliament. That force will be charged with maintaining an occupation force in Japan and conducting an air transport service between Japan and Australia.



Industry Observer

IAF orders for the B-52 have stimulated a new Boeing employment spewing that will add 5,000 new workers in the next six months and bring total company employment to 15,000.

NASA is currently operating 15 supersonic wind tunnels in its all out research attack on the problems of supersonic flight by guided missiles and piloted aircraft.

CAF is looking for test engineers with jet experience with an eye to the day when a jet manufactory will have to be installed in Civil Air Regulation. CAF test pilots are already getting jet experience in AAF and Navy planes.

RAF Group Captain Frank Whittle reporting on Britain on his American lecture tour, said American jet engines are currently about two years behind British models in basic developments but overall periods were amazingly lower (50 hours for American jets compared to 220 for British engines).

IAF and Navy accepted 135 planes on September compared with 138 in August. Average weight was 1,810,000 lbs. against 1,716,000 lbs. in August. The following planes were accepted: (Navy) 2 Martin B-57; 1 Lockheed F-104-1; Douglas BTFD-1; McDonnell FTF-5B; 20 Convair F-106-1; 10 Convair F-106-2; 21 Grumman FTF-5C; 5 FTF-5D; 10 Grumman F-103; 1 Curtiss Se-2; (Army) 38 Lockheed F-104; 12 Lockheed FTF-5B; 4 Northrop F-102; 2 Douglas CT4; 7 Fairchild C-119A and 2 Sikorsky H-34D.

Sir Geoffrey de Havilland has indicated that the death of his son while testing a tail-swept DH-101 will not interfere with further development of the plane which is a flying test model of a jet propelled aircraft to be built by de Havilland.

American Airlines will make test of Jata assisted take-offs on DC-4s equipped with an eye toward bigger payloads. American particularly wants to see Jata to get off the mile high mountain range field at Mexico City. For \$500 (the cost of four Jata seats) payloads could be increased 1,000 lbs. giving the plane a gross of 12,000 lbs.

Upset-tailored cargo carriers are placing some of the blame for the poor way in the air freight business on the side of American Airlines Contract Air Cargo which early in June announced an 11 cent a tonne rate. The carriers had to come down to that rate or lose their customers. New traffic trends lead them to believe that American has rapidly raised its rates leaving them to hold the bag with an impossible 11 cent rate. Under CAB economic regulations air freight rate would be impossible.

Helicopter Air Transport Inc. of Philadelphia has taken on a job transporting gubernatorial candidate Alfred E. Driscoll and Republican Senator H. Alexander Smith on their New Jersey election campaign in chartered helicopter.

Chicago & Southern Airlines has asked the CAB for a temporary rate of \$1.70 on surface route for the New Orleans-Houston segment of its Cincinnati run from Houston and New Orleans to San Juan and Curacao.

John Goss, former CAA personnel flying consultant, hopes to have his projected semi-nomadic service in operation by next spring. It will be started on a small regional basis in the east to work out development problems before expanding on a national scale.



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- Operational Ceiling (at T.O. weight) one engine inoperative 18,000 ft.
- Maximum Operational Ceiling (T.O. weight) two engines inoperative 20,000 ft.
- Cruise Speed at 10,000 ft. and 40°: Maximum Rated Power 300 m.p.h.
- G. a. S. Rating Length for Landing at One Level 35 ft. 10 in. at Gross Weight 30,000 lbs.
- Takeoff Distance, one M.I. at One Level (Weight Optimum) 800 ft.
- Engines F & W 1950-242-240
- Fuel Consumption, 10,000 ft. 150 Gals./hr.
- Fuel Capacity 4400 Gals.
- Operating Cost Per Mile—as low as \$0.90
- Martin cargo planes are now being built by the following sub-contractors: Cessna, Fairchild, Clinton & Southern, Republic International, United Southwest, Inc., United Engineering, Chicago, and Cessna Co. Inc. (cont.)

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TWA Pilot Strike Forecasts Wage Pattern For Airlines

Career estimates weekly loss at \$2,000,000 as dispute forces layoff of 15,000 ground employees; ALPA extends demands to American Airlines on DC-4 flights.

By BLAINE STURLEFIELD

Whatever increases may be gained by pilots in their \$2 million-a-week strike against Trans-World Airlines will be used as a yardstick by Air Line Pilots Association. In demands practically across the airline system board.

Negotiations already begun by American Airlines and ALPA before the National (Railway) Mediation Board are the second phase of the pilots' pay campaign, including a demand for a 39 percent raise on DC-4 flying pay. ALPA bases the other operations, observing the great slowdown of TWA, which seems without a doubt a TWA "head break." The TWA hearing the threat of ALPA's push on the whole system, while Frye, TWA president, and the company cannot meet the union pay demands out of profits, because it has none. This means the company is vulnerable to strike action. Negotiations are working on an estimate of strike cost, following unofficial estimates of \$3 million per week.

CAB attorneys had no precedent for opinion. But the Board will have to decide eventually whether the Government is responsible for TWA's strike losses. A certificate of convenience and necessity is in effect, a guarantee against forced failure of a route operation, and one way or another the taxpayers will foot the bill.

Frye said he could not meet the pilots' pay demands except with more revenue. The obvious source of such additional income would be mail, as which rates are set by CAB. TWA would not raise passenger and cargo rates unless other airlines did.

CAB Handicaps CAB and CAA,

other than a hasty huddle, announced they had no legal authority to interfere in the strike. CAB can influence pilot pay and other areas, says ALPA. Items on a long-term basis, in connection with rate cases. But inflated costs, and forced cuts on strikes, cannot be charged to imprudent management.

Description of TWA-ALPA negotiations under auspices of the National (Railway) Mediation Board, as recommended by the White House, held little promise, not only because it is ineffectual, but because Board members rapidly agreed to arbitration with ALPA during the thousand-effect settlement. Picture of mediation finally led to agreement by President Truman of an emergency ALPA.

Frye said he and his staff were working hard to find a way to end the strike either by Government arbitration or negotiations, and again invited the union to "sit down and discuss our problem frankly."

Chase Vans Fact and figures of the opposing camps varied widely during more than a year of controversy over 4-engine pilot pay. TWA says at first the Emergency Board's recommended wage increase did not affect August 8, and though Behnke was invited after that to consider, no wage was heard from him till October 15, when he walked into Frye's Washington office and demanded an answer to an ultimatum.

Frye and Behnke's proposal, if accepted with would leave average monthly flight unadjusted, and the result was instant release, with the result that four out of 100 aircraft, 22,370 railroad cars from Chicago to Atlanta, were stranded as 1400 pilots walked away, leaving thousands and hundreds of passengers stranded. Only 400 4-engine pilots' pay rates are at issue in this strike.



Behnke Ponders David L. Schenck, president of the Air Line Pilots Association, as he posed for questions at ALPA's Chicago conference after the announcement of the union's strike against TWA.

Behncke says he has traveled every avenue of redress, that a strike was the only means of inserting TWA's "poceratinizing section." He says he rejected the Emergency Board's recommendations because it amounted to an illegal pay cut as high as 24.7 percent for some pilots, and was 13.1 percent less than the company had already offered.

ALPA says it wants \$693.1 per month for first year captains, and \$1,096.11 per month for most senior pilots on Skymasters. On Constellations the equivalent demands are \$1,070.72 and \$1,127.61. TWA says the same demands, figured in 77 flying hours per month, half day and half night, for men of top seniority, are \$31,153 per year on Skymasters and \$34,549 on Constellations. Present pay, in accordance with the Board's recommendations, is \$31,339 and \$31,815 respectively. Previous pay was \$19,345 and \$18,114 respectively, all with variations for seniority. First and present pay for co-pilots is 36 percent above previous rates.

Ex-Service Pilots Offer to Man Planes

TWA expressed immediate interest in a proposal by the Military Pilots Association that its members break the ALPA strike by manning TWA planes. MPA was organized several months ago from Army and Navy air force pilot veterans to handle ALPA's contractual rights for ex-service personnel on the softmax.

MPA and a local council TWA's needs for DC-3 and DC-4 pilots immediately with 5 to 10 hours' checkup time per pilot required for Constellations. A long term contract was offered at terms suggested at \$1,200 a month for first pilots on foreign runs and \$1,300 a month on domestic runs. Co-pilot pay would be \$350 a month for foreign duty and \$300 a month for domestic. MPA spokesman emphasized that these terms were merely suggestions and not definite commitments.

Only high in the MPA proposal would be that CAA would have to recognize certain measurement cards for airline operations, especially since most MPA pilots have a flight pilot rating. MPA members emphasized that Army and Navy qualifications for green instrument cards were comparable

to flight tests and route checks for the airline ratings and pointed out that the bulk of its members were former Air Transport Command and Navy Air Transport Service pilots with world wide route experience.

MPA spokesman said that in order to get enough pilots to fill TWA's demands a long term contract would be necessary since its members would not want to risk their present careers for short term settlement of a wage dispute.

MPA has been at odds with ALPA over alleged discrimination against ex-service pilots on the airlines ever since the ALPA-imposed minimum pay system was introduced. MPA has recently disbanded, 5,000 pilots in a class of 14 a year compared with ALPA's annual class of 1,000 for first pilots and 425 for co-pilots.

CAB Crack-Down Hits Five Carriers

CAB cracked down on five of the country's most important unscrupulous carriers last week in a move expected to shake the foundations of unscheduled air transport.

Airhubs told by the Board to show cause why they should not be ordered to cease engaging in unscheduled air transportation in violation of sections 401 (A) and 639 (A) (4) of the Civil Aeronautics Act* are American Air Express and Import Co., Miami Springs, Fla.; Canair Airways, Miami; Central Caribbean Air Lines, New York; Trans-Luxury Airlines, New York, and Texas Air Lines, Houston.

All carry persons and property, and, except for Texair, which operates scheduled airfreight service, all have been flying interstate and outside the continental limits. The carriers cited will be given a public hearing before a CAB examiner.

August Production Jumped 39 Percent to 4,799

Deliveries of completed aircraft in August totaled 4,799 valued at \$22,602,651, the Census Bureau reports. Of that, military planes numbered 107, valued at \$9,738,385. Total August shipments increased 39 percent over July, although value increased only 1%.

Booking on Aug. 31 was 48,654, a decrease of 3 percent during the month, although dollar value of the backlog, \$1,121,501,501, was slightly over the July 31 figure of \$1,120,468,238.

airlines, cooperating with it, have placed advertisements in 1,262 daily papers in 1,381 cities and towns, with total circulation of \$10,000,000. In addition, some 500,000 business mail users are being contacted through a direct mailing program.

Air Transport Association and representatives of individual airlines in more than 400 municipalities also are furnishing the cause.

Scattered airline reports on results of the early days of the new market domestic rate, effective Oct. 1, are optimistic. Western and its allied carriers will realize 100 percent or more, already record 100 percent. Northwest officials forecast that the firm's small loads will increase 50 percent in the next three months and 100 percent in six months. United's current volume increased 6 percent from 338,384 ton-miles during the last week of August to 347,966 for the first week of the new rate.

Second Assistant Postmaster General Gen'l Sullivan looks for the ratio of new-letter letters sent by air to increase from last year's one out of 15 to one out of three a year from now, and predicts that by 1948, 2,000 commercial planes will be needed to carry the load, about four times as many as at present.

The American will dominate regional flying, being used in the heavy freight role, with a public test of the new 16-circuit a half circuit to Latin America. The reader was invited to send a letter with 10 cent postage affixed to "Pan American World Airways station, airmail test," at the capital city of any of 25 Latin American capitals, where PAA folks will return the letter airmail, postage paid and stamped with the date of receipt, to the sender whose name and address are shown on the envelope.

National Airmail Drive is Launched

National Airmail Week, launched yesterday by postmaster generalities, is another high spot in the campaign by the airlines and the Post Office to sell the public on the greater use of this type of transportation.

The department has planned and issued a postmaster's manual on 6-cent airmail promotion and the

Surplus Comets

Air Force Air Forces has declassified its remaining 30 Lockheed Constellation (C-124) transports and turned them over to War Assets Administration.

WAA spokesman indicated the planes would probably be used for such purposes as carrying supplies to areas isolated, or to convert it would cost \$10,000 to convert them for civil use.

Gen. Carl Spaatz, AFM commander, said the AAF was getting rid of the Comets as an economic measure, and the aircraft are in good condition and modification to meet present Comets safety standards would be too expensive. The 18 surplus planes were the first to come off the Lockheed line and have been in service with the ATC for over a year.

Kochel Wind Tunnels Are Rebuilt by Navy

White Oak Md. ordnance laboratory gets vacuum powered supersonic tunnels from Germany.

Germany's most famous set of wind tunnels, the birthplace of the V-2 rocket home, have been dismantled, shipped to this country and are now being reassembled by the Navy at its White Oak, Md. ordnance laboratory.

These tunnels, originally at Peenemuende and later moved to Kochel in Bavaria, were being studied closely by U.S. engineers more because their altitude again the excellent results German scientists were able to achieve by "estate," than because there is much to be learned from them.

Although the tunnels have speeds of up to Mach number 4.6 (about 3,000 mph), equal to the performance of the best tunnels in this country, their overall performance in size, air height and use of the principle of circulation and operation of long duration cannot be matched.

However, stated Major differences between U.S. tunnels and the Kochel tunnels is that the former are "blow-down" types wherein air is pushed down the tunnels at terrific speed by great force. This requires a tremendous power source. Lacking the power available in this country, Germany utilized the principle of air rushing into a vacuum tube to get great speeds in the Kochel tunnels.

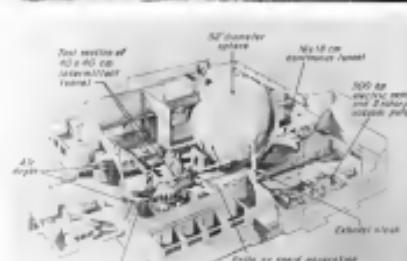
Central object in the Kochel nest is a giant sphere 32 ft in diameter which is pumped free of air. When valves are opened between the sphere and the tunnel, air rushes in and thus provides the means to get wind tunnel observations.

While operation of this "walk-in" type of tunnel is far cheaper than utilization of a blow-down tunnel, observations of test sections must be made quickly and then interrupted for a lengthy period of time while the sphere is pumped free of air.

Interservice Operation—Two of the tunnels are intermittent in operation, with a go-slowing valve beyond the test section permitting rapid changes in desired readings to take place. In this way, pressure in the sphere is kept low enough to assure supersonic flow for a number of short intervals. Test sections of both of these tunnels measure about 15% in square.

The third tunnel has a test section about seven in square and is continuous in operation until the

Members of ACC, in addition to



Navy's Transcapped Wind Tunnel Now being installed at the Naval Ordnance Laboratory, White Oak, Md., is this nest of three German wind tunnels which was originally erected at Peenemuende, later moved to Kochel, Bavaria, and was dismantled to be brought to this country. Key item is the enormous 32 ft diameter sphere in which is created a vacuum tube which air flows from the tunnels. In these tunnels V-2 models were tested as well as models of many other German projectiles, some of which are shown in the other photo. (Navy photo)

co-chairman Will Clayton, under-secretary of state; and Justice M. Landis, CAB chairman, are: William A. M. Borden, Assistant Secretary of Commerce for Air, who will be vice-chairman; W. Stuart Symington, Assistant Secretary of War for Air; Gail Saltzian, Second Assistant Postmaster General; John L. Sulivan, Undersecretary of the Navy; Badger Barnes, which has non-voting status in the committee, is represented by Paul T. Davis.

Invitations to join the Aviation Industry Advisory Council on navigation and the association's ACC have been extended to the Institute of the Aeronautical Sciences, Aircraft Industries Association, Air Transport Association, CEO, A. F. of L., and National Aerospace Association. Later, the committee will invite representatives from education, research, flying and other segments of aviation.

Three divisions have been established within ACC. A technical division will have subcommittees on aids to air navigation and landing, aviation meteorology, aircraft safety and measurement charts. An economic division will have subcommittees on facilitation of international civil aviation, area aviation policy, financing air services, and aviation information and statistics. An industrial division will have at the start subcommittees on aircraft production and aviation research.

Bendix Corp. Unveils Automatic Plotter

A navigational device that holds a printed or screened flight map in memory while it is being developed by the radio division of Bendix Aviation Corp. Designated the Bendix Automatic Plotter, it was demonstrated to delegates at the Pan-American International Civil Aviation Organization meeting in Indianapolis to study radio navigational aids.

Details of the workings of the device were not disclosed, but its performance is described by its maker approaches the fantastic.

Before starting the flight, the pilot places a standard flight map on a small "light table" in the cabin of the plane. He adjusts two automatic direction finders to conform to the course to be flown, and a spot of light appears on the map. That is the plane's position. As the plane follows the course, the spot of light moves over the map, showing the plane's actual position all the time.

John W. Hammered, sales manager of Bendix radio division, stated that the automatic plotter is not yet in production, but is still under development. It was shown to the delegates at Indianapolis "for the sake of world development in air navigation." The PICAO representatives gathered at the Indiana city after

a similar meeting in England where the British displayed their radio, radar and electronic navigational aids. A future meeting will be held in Montreal to try to determine some world standardization of aircraft navigational devices.

AVIATION CALENDAR

- Oct. 11—International Air Transport Association**, 14th-15th, Mutual Hotel & Exhibitors Building, Paris Hotel, Paris, France.
Oct. 12—Aero France Air Transport Seminar, Hotel Inter-Continental, Paris, France.
Oct. 13—National Aviation Trade Association, annual convention, Hotel Statler, New York City.
Oct. 14—Aircraft Visual Model Meeting, Cleveland, Ohio, Board of Governors Meeting, Hotel Statler, Cleveland.
Oct. 15—National Aerospace Exhibition, Park Forest, Ill., Chicago, Ill.
Oct. 16-18—National Air Transport Congress, Hotel Statler, New York City, through Oct. 18.
Oct. 17—Aero France, aviation seminar, Hotel Inter-Continental, Paris, France.
Oct. 19—Aerospace America, Washington, D.C.
Oct. 20—Hawker Wright Weight Limiting Conference, Hotel Statler, Cleveland, Ohio.
Jan. 10-12—All American Air Meet, Miami, Fla.



Study in Helicopter Controls: New approach to a troublesome helicopter problem, delaying of the mailing point as retarding blade of the rotor, is being made by French-born Jean de Chappelle, of Reading, Pa., with this helicopter utilizing boundary layer control for the rotor blades. The marker on the tips of the rotors stick away the air along the upper surfaces of the blades.

Record Attempts Feature Air Show

A variety of attempts on existing world air records, weather permitting, are being scheduled in connection with the National Aircraft Show at Cleveland, Nov. 18-30.

Included will be the round-the-world speed flight, which has been recorded for some time. This, however, probably is more routine than the other events because of the difficulty in obtaining foreign landing rights.

The Navy, under present plans, will try for a new aircraft altitude record with a Grumman F8F, and an attempt to break the helicopter weight-lifting record will be made. Two jet speed events are planned, one a straight dash, the other a trophy race between six jet planes over a circuit of six northwestern cities.

Heavy participation by the Army and Navy is on the schedule, the AFM demonstrating its jet fighter-sweat, push-button take-offs and landings, and piloted aircraft. The Navy will feature the McDonnell FD-1 Phantoms jet plane, a record-breaking Lockheed P-38 "Francesca," a demonstration of air evacuation of wounded by Naval Air Transport Service, and the dropping of supplies by parachute.

New Rotor Plane Tested at Reading

A possible solution to a problem vexing helicopter engineers has been presented by a new rotor craft built and test flown in Reading, Pa., by a French-born engineer and inventor, Jean de Chappelle.

For what is believed to be the first time in helicopter design, de Chappelle attempts to use boundary layer control to delay the stalling point of the retreating blades. The problem tackled in the novel way is by French engineer, who has come to the United States from France, the idea that in order to retain lift, the angle of attack must be constantly increased on the blades moving away from the helicopter's forward flight, while being decreased on the advancing blades.

Should this angle of attack be increased too greatly, stalling results. However, if the boundary layer, of air lying next to the upper surface of the blade, is approached at the danger of stalling is far less.

Marker on Tips: To accomplish this, de Chappelle has mounted venturi on the tips of the two blades of the rotor. The blades are hollow and divided into two sections by a partition running through the hub. The venturi give a suction effect which is applied to slots on the upper

surface of the blades about one-third of the distance along the chord from the trailing edge. The venturi are connected with the slots in such a manner that the suction produced in the venturi on the advancing blade is applied to the retreating blade, and vice versa.

It is hoped that through this system lift equalization may be obtained in forward flight as the cyclic changes of angle of attack can be considerably reduced. Also because of the greater lift efficiency expected, a markedly smaller motor is used. The power required to move the aircraft is so small, estimated to be about 2% of the power to propel aircraft.

I-126 'Big Eagle': The helicopter is powered by a six-cylinder Franklin 130 hp engine. Gross weight is 1,769 lb. and empty weight 1,309 lb. The rotor is 33 ft. in diameter and has a maximum speed of 210 revolutions per minute, giving a tip speed of 490 ft. per second. It has made 25 successful hovering tests.

Jean de Chappelle came to the country in Jan. 1946 by representation of the national committee of the French government to continue his work. It was proposed that his experiments attempt there should be observers from another country. For long-distance non-stop flights it is proposed that the plane be painted to make the plane stand out of contrast, instead of it as at present.

launched the original helicopter experiments. He is now an American citizen.

I. A. S. Transport Group Heats T. P. Wright

Civil Aeromarines Administrator T. P. Wright was guest speaker at a dinner in connection with the National Air Transport meeting of the Institute of the Aeronautical Sciences at Hotel Statler in Washington Oct. 26.

Presentation of the Col Thomas L. Thawley Navigation Award was made by Sherman M. Fairchild, ex-chairman of the board, Fairchild Engine and Airplane Corp.

The day's speakers included George Del Mar of Douglas Aircraft Co. on transport plane air navigation, A. Joseph L. Smith, director of the Pan-American International Civil Aviation Commission on international airworthiness standards; Jerome Leibner of Aero Industries, Underwriters on aircraft rescue requirements; Joseph Lyman of Sperry Gyroscope Co. on application of gyroscopes to instrument landing, and L. E. Jones of Radio Corp. of America on the television system of air navigation and traffic control. A joint session with the Institute of Navigation also was held.

Racing Rules

(McGraw-Hill World News)

London: The International Aeronautical Federation (IAF) has appointed a special committee consisting of representatives of Britain, France, and the United States, to consider alterations of the rules governing world records.

The main proposal relating to the record for the fastest speed will be put forward by the Royal Aero Club. It is that instead of covering four laps (thus in each direction over a course of 1.5 miles) the longer record should be set over even two laps (thus in each direction over a 3-mile-long course).

At present world speed record attempts are officially observed on behalf of the IAF by representatives of the national aeronautic associations making the attempt. It is now proposed that for international attempts there should be observers from another country. For long-distance non-stop flights it is proposed that the plane be painted to make the plane stand out of contrast, instead of it as at present.



Light Marks the Spot: Latest gizmo purports to take pictures out of necessity as this device was being developed by the radio division of Bendix Aviation Corp. An arbitrary flight map is placed on a "light table." When the electronic direction finders are adjusted, a spot of light on the map shows the pilot his position. The spot moves along the course with the plane. Device was shown at the Pan-American International Civil Aviation Organization meeting in Indianapolis.

Clashes Between Rival Factions Enlivens Final Clinic Sessions

Contract freight carriers and scheduled airlines tangle on CAB regulation; operators and private pilots argue on forced landing practice.

By ALEXANDER MCGURK

Two debates, one between scheduled airlines and contract air freight carriers, and one between operators and private flyers, marked the final session of the Fourth National Aviation Clinic at Oklahoma City.

Most unusual was discussion over a resolution, finally passed, asking CAB deferment of economic regulation of non-scheduled air carriers, and that all freight and express services be "separated and separate except for the purpose of both consumer and safety regulation." The resolution was strongly supported by James Wooster, head of American Airlines air cargo division, who said that as a result of recent accidents he had been presented with a list of four planes of changes to make in cargo C-46s, which were "totally unnecessary" for freight.

More Disunity—The resolution was passed with only one dissenting vote, by Robert J. Smith, Pan American Airways. He said the resolution should not be proposed, and it was a subject of disagreement between two groups of delegates. Following the debate, representatives of the other scheduled airlines present, also voted themselves in as a second with Smith. This put American Airlines Vice-Pres. D. M. Moier in the odd position of presiding from the rostrum which has its own company representative, Wooster, who previously opposed. Other airline representatives, including unaffiliated Russell Castle, TWA, A. E. Anderson, Continental, and Robert Moreland, Mid-Continent.

Another dispute arose over a resolution calling for eliminating practice of unassisted forced landings in private pilot training and examinations. Arthur Curry, Glenview, Ill., sponsor, was in protest over complete abandonment of unassisted forced landing practice, in the interest of safety. His position was challenged by Clarence Corcoran, Indiana aerobatics director, who cited statistics showing that of 14 fatalities at non-scheduled clinics in Indiana last

year, three resulted from crashes during unassisted forced landings. Other operators supported Curry, and private flyers and other state officials contested their arguments. The resolution was finally tabled after it was pointed out that its effect had long been accomplished already by CAB relaxation of use of public or private airports demanded that no additional changes be placed on the private flying community. At the level of government, pending a detailed study of proposed charges by manufacturers, foundations and government officials, challenged the regulation of aviation by any commission or agency involved in regulating any other form of transport or industry agreed by Selective Service of specialists and engineers engaged in aeronautical work.



DRY ICE TESTS:

Air shipment of dry ice in large quantities, hitherto considered impractical because of its high volatility, was found feasible in recent tests by Pan American Airways. The Civil Aeronautics Act, the principle, he explained, assures benefits to the public through methods and regulated conditions as far as transportation sufficient to stimulate the development of services and techniques, but at the same time limits the growth and extent of that competition in order to provide a minimum of economic subvention.

SPECIAL AIR SERVICES

CHAPTER

NONSCEDULED

INTRASTATE

Nonscheduled Operators Ponder Landis Warning at Clinic

CAB head cautions carriers against slanting crews of luxury trade without providing dependable public service.

Wistful of the recent fourth National Aviation Clinic at Oklahoma City, nonscheduled operators pleaded with regulators adopted by the assembly in support of their interests but still pondering the full percent of CAB Chairman James M. Landis' realistic and somewhat chastising speech, which dwelt at length on

transportation without offering to assume the obligation to the public which should appropriately accompany those privileges.

Shun Greed—"That many of them seek to skim the cream of peak traffic potentials which may exist between points for limited periods of time while avoiding the burdens of providing a service upon which the public can rely between those sites two points when the travel market appears less lucrative."

Landis described the future regulation of unaffiliated air carriers as one of the most urgent, important and troublesome matters now before the Board. He added, however, that CAB had been slow to move on the proposed revision of the nonscheduled air carrier section—Amendment No. 3, Section 201 of the Economic Regulation—and that "the Board may be able to take further action in the very near future."

Challenged Criticism—The CAB chairman elicited some talk about the proposed revision, declaring that some of the amendment which described the amendment as a move "to perpetuate selfish monopolies" ignored the principle underlying the Civil Aeronautics Act. The principle, he explained, assures benefits to the public through methods and regulated conditions as far as transportation sufficient to stimulate the development of services and techniques, but at the same time limits the growth and extent of that competition in order to provide a minimum of economic subvention.

"This rule of protection," Landis declared, "does not mean protection for the selfish benefit of the carriers involved, but protection for the benefit of the public. Many of the nonscheduled carriers who claim to have received opportunity to serve what they see as an unperfected public need are actually demanding the privileges of air

experience in the nonscheduled field. The regulators also recommended that agricultural carriers be classified as a separate and distinct category for the purposes of both safety and economic regulation.

Other industry developments

Regional Airlines, Inc., New York, initiated a plan to merge the regional airline of Illinois, Illinois Central, and Wisconsin. Roosevelt, who had held the position of president of Illinois Central, wrote a letter to Glenn Allerton, chairman of the developing board, and other activists, urging them to accept the proposal. His son, Don, is president of Illinois Central.

Trans-Continental Airways of California, successor company of Trans-Continental Airways, New York, was granted a certificate by the CAB to conduct a regional service between Denver and Houston, according to G. Roy Davis, general manager. The new route will give the company a total of 200 miles of Trans-Continental's first month of operation. The new route will be served by a Douglas DC-3 and a Douglas C-47, and a second-class green revenue of \$10,000.

Trans World Air Transport, Inc., Memphis, Phillipsburg, Memphis, asked CAB for a foreign air service permit to conduct a transoceanic service from Miami to Frankfurt and Los Angeles via Chicago, Minneapolis, Japan and Tokyo. The application was filed for permission to conduct scheduled operations from Miami to Hong Kong, Singapore and Manila. The CAB has been asked to consider the application.

Public Overseas Airlines, Atlanta, Ga., purchased two more PBY Catalinas, and will add two more to its fleet under existing lease arrangements. An ML license will be sought for the planes as soon as they are delivered, and the company plans to begin flights along PODEL routes to the Orient and South America as soon as possible.

Non-Scheduled Airline, Inc., Anchorage, Alaska, signed CAB application to conduct scheduled service between Anchorage and Los Angeles via hub-



FORD TRI-MOTOR DROPS 'SMOKE JUMPERS':

Recent field day demonstrations by the U.S. Forest Service before 200 members of the Society of American Foresters featured a parachute jump from a Ford tri-motor by the four-man fire fighting team pictured above. The "smoke jumpers" bailed out over a mountain meadow 7,500 ft above sea level near 20 miles northeast of Salt Lake City. The Ford it owned by the Johnson Flying Service, Missouri.

When History Repeats Itself....

STANLEY won't take eight months to find Dr. Livingstone...he'll FLY to Ujiji in eight hours



NEWSPAPER DROP DEMONSTRATION

Commercial possibilities of the "baseball" type non-oscillating paravane in delivering newspapers by air were demonstrated at a recent Teterboro, N. J., air show. The paravane was dropped from a Meteor Air Transport C-47 and fell within 30 feet of a panel worker placed on the field.

Similar trials, Company reports, are now being made at St. Petersburg, Fla., and at St. Petersburg, N. Y., where temporarily abandoned by Ryman-Binghamton-New York, Inc., the paravane is being operated with seven passenger places while we are productive. Company intends to release the first non-oscillating paravane to the market in January.

• **Ground Lakes Airlines**, Rockford, Ill., is advertising New York service.

• **Kennedy Court of Appeals** has affirmed the decision by the New York Aviation Commission to give Braniff Airways an intermediate franchise, thus giving the airline a right to operate between New York and Indianapolis.

• **Fairchild Air Lines**, Los Angeles, has been granted a certificate of public convenience and necessity by the Civil Aeronautics Board regarding its intermediate operations between Los Angeles-San Francisco and Los Angeles-Bakersfield.

• **Air Lines, Inc., Florida** has obtained a certificate of public convenience and necessity by the Civil Aeronautics Board, authorizing the company to engage in intermediate service between Miami and Fort Lauderdale, and between Homestead, Fla., and Miami. The Civil Aeronautics Board has ruled that the Civil Aeronautics Board of Appeals and not the General Administrator of Civil Aeronautics can grant such certificates, and that the Board's action will give the route's authority to receive.

• **Delta Air Cargo Lines, Inc., Love Field, Dallas**, started July 1948, began its first flight on Sept. 15, carrying 1,000 pounds of cargo. The cargo plane, a Douglas C-47, has a maximum weight of 10,000 pounds and 1,000 passengers. Weight limit is 1,000 pounds per passenger. The C-47 has a range of 3,000 miles and cost \$75,000. The plane is in operation and employed on all major routes in the Southwest.

• **Mountain Airways, Inc., Dallas**, has withdrawn its route application from the Civil Aeronautics Board.

• **Black Airways, Inc., Atlanta**, reported yesterday that it is experiencing a break even point on each German aircraft. The company has 10 aircraft, 100 seats, and 100 passengers per day. The company expects to merge with any other non-certified operators.

• **Mountain Airways, Inc., Las Vegas**, has accepted a \$100,000 loan from the Bank of America, San Francisco, for monthly shipments of airfreight from Las Vegas.

• **Universal Airlines, Inc., Miami**, is offering airfares from New York to Miami, \$100 round trip, and from Miami to New York, \$100 round trip. The company recently purchased three Douglas C-47s.

• **Veterans Air Lines, Newark**, is offering nonstop reservations on one-way flights between Newark and New York to New Orleans and San Antonio, with a stopover at Miami. The fare is \$100 round trip. The company has 10 Douglas C-47s and 10 Douglas C-46s.

• **E. G. Airlines, Inc., Philadelphia**, has obtained an authorization to do business in New Jersey and to do business weekly in Connecticut.

The injunction petition was filed

by George W. Thompson, president of Air Travel, Inc., San Francisco cargo carrier, and Ralph Cox, Jr., New York, who asked the court to prevent disposition of the planes and the Civil Aeronautics Board to rule on a District Court decision. The District Court (Aviation News, Oct. 24) had dismissed a suit which sought to restrain WAA from selling the planes to the certificated airlines instead of to veterans.

Thompson's attorney, in another action, at seeking a mandatory order in the District Court to compel WAA to sell 10 of the surplus C-54s to veterans immediately. Pan American Airways, which was allocated 18 of the 28 C-54s, has relinquished its right to these ten since they are not now needed.

Plan Tree Flights

Federal Air Freight Co., Los Angeles, is contemplating shipment of Christmas trees by air from Washington state to Los Angeles this December. Company plans to offer the public freight rates that will last from five to ten days longer than those shipped by rail.

Air Delivery Cheaper

A two-month study shows that air express delivery of newsmen is cheaper than motor truck distribution probably will result in expansion of the Mason, Ga., News plane service route, according to Jimmie Clegg, company president.

One economic well了解ed, was in wages—the services of the higher paid pilot being required only two hours a day, while those of the truck drivers were required full time. In addition, Georgia has had an estimated 15 days out of the year have weather that prohibits flying, and at those times papers are distributed by bus or automobile. So flying does not reduce winter losses.

The News began daily distribution of its papers by plane to four Georgia towns to the south and east of Atlanta on Sept. 4, 1948, and since then has added four more communities. The paper is dropped over a designated spot at seven towns, and a stop is made at the eighth. With other new route points now planned, a second plane may be placed in service.

THE OHIO SEAMLESS TUBE COMPANY



PLANT AND MAIL OFFICE
SHELBY, OHIO

MANUFACTURERS OF SEAMLESS AND ELECTRIC-WELDED STEEL TUBING

4 big reasons for selling AEROMATIC PROPELLERS



Last fall's record plane sales on the market were made with Aeromatic propellers—over 120 m.p.h.—from a range of 100 miles.

1 Larger Profits

An Aeromatic Propeller has a high market value . . . means more money for you . . . because it does so much to improve a light plane's performance.

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Aeromatic Propellers are easier to sell than most other equipment . . . because their advantages are so basic, so simple to demonstrate to a prospect.

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Aeromatic owners are better buyers of other goods and services. They buy more . . . because they fly more . . . because they get more fun out of flying. These Aeromatic equipped planes.

4 Customers Sell Their Friends

Better take-offs, climbing, cruises and landings make other-aeromatic owners eager to convince their fellow pilots of these benefits.

BETTER TAKE-OFF, CLIMBING, CRUISING, LANDING MAKE MANY PRIVATE FLYERS AEROMATIC PROSPECTS

Aeromatic Propellers have that ideal combination of yielding a profitable return on the initial sale . . . and helping bring more business your way thereafter. And there's the further advantage of selling an exclusive item, too . . . since Aeromatic is the only fully automatic variable pitch propeller.

Without any controls or gadgets, the Aeromatic Propeller varies its own pitch in response to natural forces . . . utilizes full engine power at rated speed . . . assures maximum performance under all flight conditions. That means up to 33% shorter take-off runs . . . up to 25% faster climbing . . . top cruising performance on minimum fuel consumption . . . long, fast glides for landing with a quick pick-up if pilot overshoots his field.

Performances like that makes Aeromatic Propellers easier to sell . . . increases sales volume. If the planes you sell are selling, do not already include Aeromatic Propellers as standard or optional equipment . . . write today to your distributor or manufacturer. Point out how Aeromatic can do the double job of improving flight efficiency and boosting profits for the planes you sell. Aeromatic, 616 Scott Street, Baltimore 3, Maryland.



THE PROPELLER WITH A MAJOR PAY OFF FOR AIRCRAFT PLANE
All-controlled automatically



PRODUCTION

BUSINESS OUTLOOK

Aircraft Industry Has Sharp Eye On November Election Returns

Drastic cuts in national defense budget will affect procurement that now mean difference between profit and loss for backbone of manufacturing strength.

By WILLIAM KROGER

For an industry that ordinarily is not—and in theory never should be—dependent upon the political adherence of the congressional majority, aircraft manufacturing has been deeply affected by results of the forthcoming election. This is the view of a great many observers in Washington, both within aviation and outside, to whom aircraft manufacturing is merely one segment of U. S. industry, and who judge the health of any enterprise by profit and loss statements and not by the size of backlog of orders.

These observers are torn between two theories, both having to do with military and naval procurement. Item one is the view that should the Republicans dominate the next Congress, they will be intent upon making a record on economy. This means lower budgets across the board, but particularly in that large, rather ambiguous field labelled "national defense."

Item two is the fact that the present administration already is committed to sizable economy cuts. The question is not whether these cuts are a fact in the plan—whether they will be followed as the Democratic majority is now in Congress. To date, economies in the sphere of national defense have been in terms of personnel. Careful inquiry still shows no inclination to cut back existing procurement contracts. It is admitted that this last aspect may come, but if it does it will not be for many months.

Fit-in Public Works—If the best continues to be applied to economy, there may be another development, the shadow of which may have been the recent go-ahead

given to federal public works projects. Such projects are politically popular. If the only chance were to be maintaining them, aircraft manufacturers would be deeply affected by results of the forthcoming election. This is the view of a great many observers, whereas President Robert E. Gross reported in effect that half-a-dozen of some 150 B-52s made the difference between an anticipated \$1,880,000 profit and the loss of \$424,500 that was actually incurred. This was on sales through June 30 of \$84,196,717. Observers are inclined to agree with Gross's prediction that Lockheed will not turn up with a loss for the entire year. Nevertheless, the Lockheed report is seen as the prime example of the philosophy driving the current political game.

On the other hand, Lockheed's troubles were due to excess rather than the control of the company—shortage of essential parts—which might have been just as serious if the company were engaged primarily in off-the-shelf commercial orders. Lockheed's delivery delays are due primarily to the strike in General Motors plants, makers of the P-80 engine, which occurred



HELICOPTER TEST TUBE:

A later version of Readin Helicopter's Model K (Aviation News, Sept. 30) with an enclosed fuselage. Earlier test machines had an uncovered fuselage. This model is a laboratory for a four-place helicopter on which the firm is now working. In more recent tests of the Model K, it has made many flights at better than 200 ft. altitude and at speeds up to 60 mph, although no maximum speed and altitude trade have been made. Model K has a 60 hp Continental engine, while the larger Model J will have a 450 hp Pratt & Whitney power plant.



ROCKET POWER:

W. L. Williams, senior manager, Rocket Aircraft Co., San Diego, displays the Solar-Boeing rocket motor which powers the Army's WAC Corporal and High-altitude rocket. One of the first successful rocket motors, this solid-fuel engine is scaled by liquid fuel as it spiraled around the firing chamber. (Armstrong Photo Inc.)

early this year. While Allison is generally on schedule, production fell behind during the strike.

British Backlog — The fact that the engine industry has a large backlog of more than one billion dollars—good enough financially to assure health—is being disregarded in present calculations of the industry's immediate future. Even some industry statists are beginning to assert the need for further streamlining current income rather than backlog. They point to Lockheed and to the instance of Royal Aircraft, which has come from production because of the drain on its working capital due to inability to finish work in progress, to bolster the argument that backlog does not merit priority.

Differences are believed to be increasing—the latest official figures, for August, show a sizable gain over July—with a general feeling that in the final two months of the year, the rate will continue upward. However, the chief progress in differences so far has been on the part of the British manufacturers and it is expected that this condition will continue. Manufacturers and planers are not required to produce much in the commercial market until spring and summer of 1947. This leaves those examining the relation of military orders to the industry's business outlook with another fear.

It is a possible outbreak of those airline orders which at present would be expected to enable the industry to fare reasonably well should military procurement be curtailed next year. United Airlines President, William A. Patterson, and his friends think it doesn't look too good, however, to make such a prediction for 1947. The airlines are deeper into working capital probably faster even than the manufacturers. Airline creditors are showing marked weakness.

Bald Weather — If bad weather curtails airline revenue this winter as much as it has in the past, there is some opinion that the carriers might be forced to re-examine their orders for transports aircraft on a basis of ability to pay rather than a need for equipment. Whether or not this situation develops depends in some measure on the availability of credit. In spite of predictions of bankruptcy to come, it can be expected, at this point, to begin deliveries of DC-3s shortly after the first of the year. Martin will have the first 300 off the line probably in December—and will be followed with the first delivery to PCA, early in January. Using the same technique of no prototype, Boeing anticipates its model 417 will be flying possibly in April with deliveries to airlines a few months later. Its Strato-cruiser will be ready in late winter or early spring. Lockheed's Constellation, model 64, should be flying in May before year's end.

Here again, the big "if" is in the material and parts situation. Allusion is expected to become heavier before the year closes. The Kestrel

plants are delivering about 12,000-13,000 ft of sheet this month, and Alcoa is staying to meet all its commitments. But there is some thinking that after the first of the year more aluminum will be directed into housing channels. There is also the likelihood of a shortage of aluminum as war-built reserves are eaten up.

Another factor that might retard deliveries is a further round of strikes for wage increases, not necessarily in aircraft plants as much as in supplier factories. Already the United Automobile Workers are talking of demands for pay raises and many of the parts and fixtures necessary for aircraft manufacturers come from companies which would be affected by any general UAW work stoppage.

British Mamba Has Tiny Power Package

One of the smallest and lightest aircraft engines in its power range built being readied for flight testing by Britain's Armstrong Siddeley Motors Ltd. It is the Mamba, a propeller turbine which for take-off develops 1,100 hp, plus 325 ft of thrust or roughly 1,120 hp.

Weight of the Mamba is 390 lb and its diameter is 27 in. Overall length, including jet pipe, is 10 ft 4 in. There is no provision for landing gear, but the engine is designed to develop 2,350 hp at sea level of 38,000 ft. Flight tests on the Armstrong Siddeley Caenader, model 68, should be started by year's end.

Ed Jakubka, in charge of the factory delivery system at the Piper Aircraft Corporation, Lockhaven, Pa.

The longest delivery, 4,063 air miles, was flown to Anchorage, Alaska. The average trip is 816 air miles.

Irving Air Chute Co. Names Distributors

Fourteen distributors recently named by Irving Air Chute Co., Buffalo, N. Y., as a result of a recent tour of the country by Harold G. Rogers, Irving vice-president in charge of sales, flown in an Electra, are:

Powert Aircraft Sales Co., New Orleans; Northeast Aviation Co. of Portland, Me.; Omaha Club Aircraft Co.; Boston Turner Aeromarine Corp., Indianapolis; Southwest Precision Co., Dallas; Philadelphia Pa. Aviation Corp.; Gibbs Aviation Corp., Hicksville, Long Island, Calif.; Aeromarine Sales, Clinton, Mich.; Buffalo (N. Y.) Aeromarine Corp.; Midwest Flying Service, DeKalb, Calif.; Santa Barbara Flying Service, Goleta, Calif.; National Aeromarine, Inc., Chicago; Robert Flyer Services, Lexington, Ky.; Modern Aircraft Corp., Detroit.

The distributor will handle and service the complete line of Irving Air Chutes, including the new Chair Cote, which fits into the back of the airplane seat, and need not be worn, but is immediately available for emergency use.



SPECIAL EVENTS BROADCASTS

New York Radio Station WOR has an arrangement with Sojair Flying Service, Teterboro, N. J., to use a new three-place Super Piper Cruiser for covering special events by broadcast from the plane, relaxed, of course by the ground station. Installation of amateur transmitting jacks can be made in a matter of moments, on the back seat of the plane, from which Paul Kilbom, WOR general manager, makes the "hand-to-hand" contact of who goes on. Similar arrangements will be worked out by other emergency dealers with their local radio stations, provided they have available planes a little larger than the minimum two-place 65 hp engine which probably would not carry the maximum load of pilot, passenger and necessary equipment.



LUSCOMBE 85:

A new do-haze 85 hp two-place all-metal Luscombe Silhouette, which has maximum speed of more than 125 mph, and cruise at 112 mph. It passed CAA type approval tests and is in limited production at the Dallas Luscombe plant. L. H. P. Kots, president, announced recently, Enriching in many respects the 85 hp Silhouette which is continuing in production at the rate of 15 a day, the do-haze 1947 plane has electric starters, generator, wheel pants, landing and position lights, sound-proofing and improved flight instruments as standard equipment. New side windows give 85 percent more visibility of sides and rear. The 15 hp Silhouette lands at 48 mph, has 600-mi. cruising range, and 550-lb useful load.

Minnesota Air Operators Form New Trade Group

Flight base operators on Minnesota's airports, flying flight instruction, charter aircraft, maintenance and repair, have formed the Minnesota Aviation Trades Association with Minneapolis headquarters at 110 Northwester Bank building. Frank B. Cliff formerly with Minnesota Department of Aeronautics is executive director.

Elected to the dual board of directors are: E. H. Craft, Gopher Aviation, Inc., Rochester; C. W. Hinck, Hinck Flying Service, Minneapolis; G. J. Town, Air Aviation, Inc., South St. Paul; Harold Schleusener, Minnako Avia Service, Minneapolis; Miller Wing, Arrowhead Airways, Hibbing; Robert Young, American Aviation Corp., Minneapolis; J. D. Lyons, Lyons Flying Service, Minneapolis.

Flying Salesman

Walter Thompson, Milwaukee commercial salesman, has expanded his sales territory to six states since he acquired his Airman Chute and hopes to take in additional territory soon. He makes the rounds to commercial supply houses in Wisconsin, Minnesota, Iowa, North and South Dakota and Utah, on a six-week flying trip. Besides the advantage of quicker transportation, Thompson reports that his plane advertises his business to his customers.

Nation Delivers

North American Aviation last week began delivery of seventeen Navions to dealers throughout the United States. Following initial delivery, delivery of the personal aircraft will go to customers who have ordered directly from the factory. Subsequently all production will go to dealers.

Red Tape Snarls Border Air Travel

International air traveling by private planes is being hindered by official red tape on both the United States and Canadian sides of the border, Canadian sources reported recently.

American air tourists coming to Canada and Canadians going to the United States have to meet stiff customs regulations, requiring filling out of many forms in duplicate and triplicate, examination of all aircraft by agricultural department inspectors in the United States for possible importation of plant material, as well as all other border regulations. In each case customs and immigration officers must be satisfied ahead of time of arrival of aircraft and passenger merchandise.

In Canada airports charge \$1 landing fee for private planes, but customs and immigration officers are as busy as wages supports 36 hours a day. Notifications to some Canadian airports must be made three days in advance.

West-leading Canadian air tourists find that customs and immigration efforts do not work week-end in the United States, that the private plane pilot must pay costs of others coming to inspect as well as transportation, usually involving a minimum of \$45 of each port. Committees of consumers and other business organizations are endeavoring to have the border air red tape eased, to give private pilots flying their own planes the same advantages in



AEROMAC CHUM IN FLIGHT:

The two-place single-control Aeromac Chum, shown in flight, will go into production early next year at a new Aeromac plant at an airfield location. The Chum has 115 mph top speed, cruise at 105 mph and lands at 40 mph. An auto-reverser option is built under license from the Weak Brosse patent. Powered with an 85 hp Continental engine, it is all-metal construction except fabric wing-covering, has 600-mile range with 22 gallons capacity gasoline. (See AVIATION NEWS, July 1, June 17, 1946 and March 5, 1945.)

crossing the border that the international express. Typical of many customs regulations is the fact that in Canada U.S. private pilots cannot take Canadian friends for a trip without obtaining special permission.

Reading Air Show Draws 50,000

More than 50,000 spectators watched the two-day Reading Pa. air show, recently which included one of the most complete showings of personal aircraft, yet



ESTES PARK STRIP:

Mountain surrounds the Estes-Rocky Mountain National Park (Colo.) area, which makes a specialty of tourist flights to see and photograph the scenery. (See AVIATION NEWS, May 20, 1946.) Photo shows a Cesna two-place 180 in foreground, with W. C. Bassettman operator of the strip, and of Aviation Associates, Chicago, standing in the foreground with tourists in background.

to be seen. Planes exhibited included several Aeromac, Bellanca Coupe Jr., Culver Model Express, North American Mustang, Republic P-47, Republic Souther, Brewster Bobcat, Curtiss Voyager 120, two Canadair-built Canaders, and a British-built Percival Proctor.

The show also featured an hour's performance by 14 Navy planes, and flight exhibitions by civilian aerobatic experts. Melvin H. Narr, airport manager, and assistant show director, said it was planned to hold the show annually at Reading, probably earlier, in the future, to take advantage of warmer weather. Show director was Stanhope Adcox.

FCC Will Accept Word On Aircraft Radio Check

Federal Communications Commission will soon accept a manufacturer's certificate that radio equipment installed in new aircraft has been inspected and is operating properly, as a temporary 30-day authority for operation of the aircraft radio pending action as the pilot's formal application for a permanent station license, it was announced here last week. The action was taken after a number of aircraft manufacturers claimed that they were planning to market planes equipped at the factory with standard radio equipment. The new regulation (file

934) requires that a copy of the certificates be posted in the plane, and that the original be sent in to FCC with the application for permanent license.

Mattaponi Sky Club Offers Carriage Service for Pilots

The Mattaponi Sky Club, on the old Robert Bowie estate, at Crosson, Mo., is believed to be the first aviation country club in the state and the only facility of its kind within a 200-mile radius. A 3,300-foot dirt runway is provided, with the novelty of carriage service for fly-in visitors, from the field to the manor house. Recreational facilities include tennis, swimming, softball, tennis courts, badminton and table tennis. The owner, C. Edward Bowes, has been using the club for his own flights for several years, but was urged by friends to convert the facilities into an aviation club, he said.

Shell Oil Develops Fuel 'Beaver' for Airport Use

A 200-gallon mobile airplane refueling unit, called "the Beaver," has been developed for the Shell Oil Co., at Houston, Tex., to replace or supplement stationary pumping units and large trucks, for greater servicing efficiency to small and medium-sized planes.

Designed to travel over any surface on which a plane can land, the unit is 45 inches wide, 46 inches high and 130 inches long. Since average flight times reflected in approach to 15 minutes, officials expect the Beaver will bring fuel approximately 30 miles without refill. It requires only one man to operate it, and will bring the fuel to the planes in the field without necessity for long hunting by pilots.

AVTO-PLANE STATION—Plans for the first automobile-airplane filling station airport in Ohio, are being prepared by Columbus Aircraft Sales & Service, new opening at the Parks garage at Fort Columbus. The station will front on North Cleveland avenue and Route 44, so that auto gas fill tanks will be there, while planes tank up from the field to the other side of the pump. The new field will be opened after the first of the year, and will include clinics for overnight air and motor sports, a speed limit and private pavilions.

No Sudden Changes

No sudden or drastic changes in the planes now being used in private flying, he says, according to George Steiner, Steiner Aviation Corp., personal plane sales manager. The planes may change slowly but for longer than today's jet prices, he expects many new buyers to consider business. He expects public interest in overcome handicaps of inadequate landing facilities, lack of hangars, and high cost of aircraft.

Briefing For Private Flying

LIGHTPLANE "BELT"—A wing through Kansas, Oklahoma and Texas shows the big midwestern region in the home of a large part of the nation's personal aircraft industry. Wichita long has been an important aviation center, with Beech, Cessna and Culver among the prominent manufacturers, and also Boeing-Wichita, which is now making a modified 737B aircraft. The light jet market from the first personal aircraft. Fly there in Fairchild, Lockheed, King, and Fokker aircraft. On down the Beech Pipe at Tulsa, Cessna, Sikorsky at Elkhart, and Spartan of Tulsa, Okla. While Texas has Learone, Texas Engineering & Manufacturing, Southern, Aerostar, Beldner-Campbell and American Eaglecraft at Dallas, and Globe and Buetel at Ft. Worth. The 16 companies range from producers of minimum aircraft to do-his-own-engine executive transports. A check with manufacturers establishes the following reasons for the concentration in this area: Located midway between coast roads for movement of shipping or highway; good flying weather and terrain; good labor market; at the heart of the best current personal plane market in the nation.

MARKET TREND TIPOFF—Tipoff that the seller's market for personal aircraft, is easing off, and that real personal plane salesmanship will be needed from now on, may be taken from the advertising columns of most of the local aviation newspapers which are carrying up-to-date market reports. The following information of 1946 sales figures for ready, the local dealers are carrying lots of distributors and dealers promising immediate delivery on planes which a short time ago had a considerable waiting list. This is due in large measure to increased production of planes in recent months, and to the fact that the big market for GE interior planes is being well filled-up. A number of manufacturers are making no effort to seek any higher production than current levels and are following a policy of watchful waiting.

HELICOPTER HOPPING—The first case of using a helicopter to hop ashore passengers, that has come to Boeing's attention, was the use of Helicopter Air Transport's Sikorsky S-51 three-place helicopter to land sightseers at St. Kilda, at the recent Reading, Pa., air show. Passenger hopping has always been a good auxiliary source of income to operators, as a means of moving new customers to the ranks of the non-flying. The shortcoming of the helicopter is that it cannot pick up passengers from which it alights, over the conventional aircraft indicates it may have a bright immediate future for this type of flight, which will at the same time give the public passenger experience with the money-saving craft from which such great things are expected in the next few years.

AVTO-PLANE STATION—Plans for the first automobile-airplane filling station airport in Ohio, are being prepared by Columbus Aircraft Sales & Service, new opening at the Parks garage at Fort Columbus. The station will front on North Cleveland avenue and Route 44, so that auto gas fill tanks will be there, while planes tank up from the field to the other side of the pump. The new field will be opened after the first of the year, and will include clinics for overnight air and motor sports, a speed limit and private pavilions.

CURB FOR HOT PLATES—New York city police department has 61 pilots and 31 mechanics among its personnel and is asking for money from the city for four new airplanes, including two amphibians, one small landplane and one transport plane. In addition to the Binnen-Belast already owned by the department, the new planes would be used to take heavy members of police visiting air exhibitions such as midwest air meets like Flying, as well as to assist traffic jams. In city streets by reduced instructions to traffic squad cars. Tread toward more and more serial police patrols, both state and local, is expected within the next few years, throughout the country, as additional planes take to the air and user control of air traffic is required. Recent conference held by CAA to state state police is a step in the same direction.

—Alexander McNamara

FINANCIAL

Airline Shares Suffer Sharpest Setback in Stock Market Drop

Declines range from \$1 to 63% below top 1946 prices as steady four year rise of air securities ends.

In the general market liquidation of the past few months, air line equities suffered one of their sharpest set backs in history. Declines ranged from about 32 to 63 percent from top 1946 prices were recorded for the leading air carrier shares.

During the past four years, air transport securities had experienced a massive rise and outdistanced other industrial groups in the markets. The growth trends and future prospects of the air transport industry were considered at liberal levels. It was only natural, therefore, that as any adjustment process of the market, air transport equities would be particularly vulnerable.

Eastern Loss 38%—Eastern Airlines showed the steepest decline, with a loss of only 32.8 percent. The remaining good earnings of Eastern, particularly when other carriers were running substantially in the red, proved to be a potent market sustaining force. This is further proof that in the final analysis, earning power of a company is one of the most important factors in determining stock price levels. The company's loan-for-debt stock split in May, 1946 has also added speculative flavor and broadened ownership and marked return in Eastern's shares.

The greatest decline was experienced by TWA, of 62.6 percent from its best 1946 prices. The unfortunate experience of the company with its Constellation has taken a heavy toll of earnings. For the first five months of 1946 the company reported losses \$1,300,000. TWA had \$40 million in debts, terms outstanding which provide considerable leverage in reverse and endanger the equity when deficits mount. It appears likely that TWA will finish the full year 1946 in the red. The company does have valuable world wide routes which together with its domestic properties affords the

60 percent of the 100,000 shares outstanding are owned by one stockholder with other large blocks reported in strong hands. The company has always enjoyed a favorable record as one of the better financial carriers. Opening of the West Coast base has given Western some favorable implications in establishing a Seattle-San Francisco route. Evidently the deficit operations of the first half—\$497,186, compared to a profit of \$216,334 for the same period a year ago—had had its depressive effect.

American, Convair, Dow—American Airlines common stock declined less than half in market value. The company's earnings have made a remarkable recovery after deficit operations the earlier part of the year. The company's stock has developed to be one of the most active on the New York Stock Exchange, particularly popular among the first ten as the gauge of volume. American also has the largest corporate stock participation in the industry—\$452,816 shares. This was a third result of the five-way common split in April, 1946. It is of interest to note that G. C. R. Smith's option on 250,000 shares of common stock at \$11.50 per share, once worth approximately \$2 million is under water at the present time. However, this call on steel retains the tangible value and potential prestige with any maturing of market appreciation in the price of American Airlines common stock.

Despite the recent decrease in airline stock values, prices for the most part are still above the low point of 1945. And during 1945, prices were generally higher than in previous years.

The future trend of air line share values is largely dependent upon general market conditions

1946 Market Range Listed Airline Securities

	High	Low	Last*	Total
American	195	125	110	50.1%
Brown	585	125	110	50.0%
Colonial	195	125	110	50.0%
National	315	125	110	50.0%
Northwest	215	125	110	50.0%
Pan American	215	125	110	50.0%
TAA	225	210	210	44.9%
TWA	450	125	110	50.0%
United	225	125	110	50.0%
Western	225	125	110	50.0%

* To October 10th, 1946.

TRANSPORT

Air Cargo Carriers Seeking To Stake Vast Freight Claim

CAB hearing exhibits reveal expansion plans for leading contract carriers on scale of major airline operations; see 80,000,000 ton-miles/year.

By CHARLES L. ADAMS

Drawing their lines for a battle of survival with the established airlines, the world's largest contract and non-scheduled cargo services have disclosed for the first time their plans for continued dominance in the air freight industry.

Their blueprints for the future contemplate common carrier all-cargo operations of a scope that would soon give them positions well up among the leading domestic airlines both from the standpoint of plane routes flown and gross revenues.

Bolstering their claims with comprehensive statistical records the cargo lines, in exhibits prepared for the all-important air-freight case hearings next month, have taken full credit for the phenomenal growth of the industry since the war ended. They will attempt to use this argument for the massive and energy of the unaffiliated companies—as stimulus the scheduled carriers to action during recent months—air-freight still must be a necessity in airline operations.

Cargo Battle—Looking toward to common carrier benefited service, several of the airfreight applicants have envisioned traffic potentials—and those over share in the total—which undoubtedly will be subject to sharp challenges by the permanently-certified airlines. The airlines, with an uneasy eye on sharpish passenger load factors, are coveting air cargo to take up some of the slack and will continue to contend that sufficient can be handled more efficiently and economically in conjunction with passenger flights.

Magnumeade of the all-cargo operation proposed by the airfreighters during their first year as certified scheduled carriers is posted

only about \$75,000 less than the total operating income of PCA for 1945 and is more than the income of Northwest Airlines for the same year.

Black Plan—During its second year of certificate operations, Black hopes to fly \$46,428,389 freight ton miles with an enlarged fleet of 10 C-45s at an average ton-mile of 12 cents a ton mile and during its fourth year, 463,311,200 ton miles with an unexpected new type of aircraft—an average ton-mile of 6 cents a ton mile, plus which Black wants to replace its C-45s by 1949 would have two or four engines, a 20,000-lb. payload capacity, a 1,500-

Zimmerly Resigns

Bert Zimmerly, founder of Western Air Lines, has resigned as president of the company to devote his time to his home base flying school and charter operation at Lewiston, Idaho, but will continue to serve as the board of directors. New president is Joe Luisa. Present managing director and former Joe Zimmerman, Lewiston agricultural marketing dealer, becomes vice-president. The airline operated as Ellsworth Air Transport prior to CAB certification to serve Idaho, Oregon and Washington, continuing as an interstate carrier.



Cargo for India's National Skysway Freight Corp., Los Angeles (The Flying Tiger Line), recently flew a \$1,000,000 cargo of Reynolds ball paper from the Chicago factory to LeGuardia Field, where they were transshipped to Trans World, American, British Overseas Airways. The cargo was carried in cargo planes (about 10) which carried the press to New York. This is one of 15 C-47s acquired by NSFC. The Flying Tigers will make their bid for a certificate authorizing scheduled common carrier operations in CAB's airfreight case hearing next month.

mile operating range, and a 300 mph. maximum speed.

Black figures an overall domestic airfreight volume in 1947 of 1,260,000,000 ton miles at a 12-cent rate and 8,000,000,000 ton miles in 1959 at a 6-cent rate. The 12-cent ton-mile, Black states, would be comparable to a surface carrier rate of 16 cents a ton mile due to the reduced mileage by air.

Similarly, a 6-cent rate would be comparable to a 7.8-cent surface charge. At the 12-cent mark, Black said airfreight could compete directly on a price basis for a substantial volume of trade now moving via Railway Express. "At the 3-cent figure, airfreight could compete directly for the bulk of Railway Express and for a substantial portion of less-than-carload rail freight."

Phantom Tiger Subsidiary—National Skysway Freight Corp., Los Angeles (The Flying Tiger Line), which now operates 13 C-45s, 18 C-54s, 100-ton freight ton miles annually. Black estimates cargo revenues of \$10,800,000 (and \$873,000 net operating income before taxes) for the first anticipated year, when it would carry freight of 125 cents a ton mile. The \$10,800,000 figure is

sustained in a \$181,467 operating loss at 15 cents a ton mile.

West Marin 38s—With Martin 38s, U.S. estimated 19,861,358 plane miles would result in \$2,660,000 ton miles annually (15 percent load factor)—yielding a \$1,028,084 profit at the 15 cent rate.

With DC-4s, the company estimated 18,456,358 plane miles would result in 135,300,000 ton miles annually (17 percent load factor)—yielding \$6,184,802 at the 15 cent rate. U.S. also believes it can make a small profit (191,234) operating DC-3s at 11 cent rate based upon an 11 percent rate—representing the same annual anticipated volume.

Wills Air Service, New York, which presently operates six C-45s and two C-54s, produced an estimate for scheduled service in a fleet of 12 C-54s flying 30,225,000 revenue ton miles (\$455,714 plane miles) at an average rate of 15 cents a ton mile. (Wills was flying at an annual rate of about 1,100,000 plane miles in July.) Estimated profit before taxes for the proposed certificated service is \$335,000 annually.

All four carriers have made application for areas as area routes will push far afield because of this type operation to meet the need for flexibility in cargo service. Black wants routes connecting four airfreight areas (Califor-

nia, Texas, Middle West industrial, and Eastern industrial). NSFC has designated six areas: U.S., Mexico, and West, East. Service would be provided between any point in one area and any point in another area, but not between points in the same area.

A dozen operating uncertified airlines, together with a number of paper companies and PCA have applications pending in the airfreight case. Twelve wheeled airlines will provide active opposition to the all-cargo route bids.

SKY PASSENGERS

All American Aviation, Inc., the nation's only certificated perhaps operator, last week asked CAB for a certificate in early January, apparently and valid over five metropolitan routes in the Philadelphia-Camden and Pittsburgh areas.



PASSENGER PROBLEM:

When Martin Lewis, 650-lb. wrestler who losses to The Hawk, arrived at Western Air Lines' Denver terminal for a ticket to Grand Junction, Colo., Triggs thought he should buy two tickets. Lewis thought otherwise—six persons, one ticket. As manager, Triggs argued. Lewis' slide-rule calculations showed that his \$45.00 one-way ticket would easily stress fuselage floor members. Cargo suggested a passenger and trit or two be bled out solution—as area route was removed, Lewis computed one route via the free, and get to Grand Junction as fast as for his punch.

Airline Executives Challenge Patterson

United President claims an excess farm to cover 60 percent bulge in carriers' costs and traffic drops. Tye, Smith and Riesbecke reply.

Top executives of Eastern Air Lines, American Airlines and TWA challenged recent predictions by United Air Lines President W. A. Patterson that air firms will have to be raised to meet a 60 percent bulge in costs and a dip in traffic.

Two of the three officials who publicly countered Patterson's remarks, however, indicated that continued increases in wages and costs of materials and equipment might change their own viewpoint in coming months.

Patterson, in a statement at Portland, Ore., forecast that all commercial airlines will be losing money by next summer and declared that last quarter 1946 holds little promise of profitable operations. He said his company's traffic was off about 4 percent during a recent three-week period and that cargo space was not being used.

Need 60% Load—Unless the way, Patterson stated, United could break even on a 65 percent load factor, but now requires 80 percent. He said the cost of services this winter would be the poorest in years because of canceled flights resulting from poor weather and the "weakness" of planes for landing at principal traffic centers.

E. V. Riesbecke, EAL president, declared his company had ordered new equipment and in-

creased new schedules to create more space for passengers. "The fact that seats are increasingly available would surprise some operators as its size in 1946 just as it had in 1945," provided the charges for air transports are kept within the reach of the average citizen." "I am convinced," he commented, "that it is not yet apparent that we must seek higher fares."

Jack Tye, TWA president, declared he could not agree with Patterson's gloomy forecast for the future. He admitted there had been evidence of a downward trend in traffic during recent weeks, but said it was no surprise—rather one of the first indications of a return to normality in the airline business.

Don't Need Provisions—"We do not feel the situation calls for provisions," Tye continued. "The recent 3 percent rate cut should produce a substantial area of increased revenue. It is probable that the traffic demand on our foreign routes will continue heavy for several years."

Frye admitted that TWA expects to show a loss for the third quarter of this year but said it had hopes for profitable fourth quarter operations. TWA's forecasts indicate that 1947 operations should be well in the black, based on present costs and rates, Frye added. His statement was issued before a stock strike was set up TWA's officers.

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creased new schedules to create more space for passengers. "The fact that seats are increasingly available would surprise some operators as its size in 1946 just as it had in 1945," provided the charges for air transports are kept within the reach of the average citizen." "I am convinced," he commented, "that it is not yet apparent that we must seek higher fares."

Northwest Profits For First Six Months

Improvement in the financial position of Northwest Airlines, despite a downward turn in airline revenues generally, is disclosed in CAB records covering the first six months of 1946.

Northwest January-June revenues were \$97 million per revenue mile, netting operating expenses of \$61.5 million per revenue mile. Company officials say the 11.1 cost profit differential is well above the industry average. Net profit of the carrier was \$342,621 for the period. Of the total \$353,764 in operating revenues, \$7,467,260 was passenger revenues, \$396,182 mail and \$173,292 ex-

press. Croft Hunter, NWA president and general manager, and passenger revenues represented the major increase. With additional equipment and more frequent service, passenger loads exceeded 70,300 in both August and September.

The carrier is awaiting the end of its DC-4s in two years instead of four as planned by some of the other major airlines. The line has its DC-4s and six more on order.

Money to finance the company's expansion into the international field, additional facilities, and fleets of Boeing Stratocruisers and Martin 202s and 302s on order will come from this month's sale of 221,633 shares of additional \$18 par value common stock to shareholders, at the rate of one share for every two held of record Oct. 30. After 15 days all remaining shares of the new issue will be offered to the public.

NWA officials estimate that total operating revenue will exceed \$300,000,000 in 1947, or 50 percent above 1946 totals. They predict that revenues will increase rapidly from an estimated \$40 million this year to around \$350 million in 1947, and probably reach \$70 million in 1948, during at least part of which the new aircraft now on order will be operating.

Joint Terminal Group Plans New Operation

Washington National Airport is the likely third site for experiments in consolidated airline terminal service by the newly formed Airlines Terminal Corp., which is prepared to launch the cooperative venture at Willow Run airport, Detroit, and Greater Cincinnati airport, Kenton County, Ky.

Ray Callahan, general manager of the organization, has gone to Willow Run to set up an office from which to direct the first operation in the test areas, aimed at greater economy and efficiency through elimination of duplication of effort in handling luggage on fields and in terminal buildings.

Initial organization of the corporation is \$500,000 on the basis of 6,000 shares at \$100 each. Stock will be held by the airlines. The service agreement under which the organization is being effected was prepared to the carriers at a recent meeting of the Air Transport Association. Rough contributions were received to assure the required minimum subscription of 3,750 shares of stock, and the organization was started.

Other airport developments

New York—Concessional airline of most of Floyd Bennett Field was granted by the city of New York following completion of arrangements with the Navy by the city for use of the field as a military base. The field will be twice as large as La Guardia.

Albuquerque, N. M.—More than

1,000 passengers daily

at the Ted Williams Airport, site of

a fleet of scheduled airline craft.

Official control of the terminal



NEW TICKET FORM:

American Airlines is using the new ticket form shown above on most of its routes. Part of the ticket features a long list of multiple destinations in route sequence. Agent names in flight number and departure date and name. Receipts and cashiers are put and printed statement for refunds for unused portions. A counter tab showed 22 seconds required to fill out the new ticket against 33 for the old form.

Baltimore—American Airlines, which started operations in the Baltimore-Washington area in 1945, has added the area May 25. Baltimore officials presented a check for \$100,000 as a contribution to the city during its seven-year campaign to build a modern airport. Baltimore received \$100,000 dollar bonds for the sum of \$100,000.

Baldwin-McKinney—Baldwin's participation in the joint venture of the two cities will be limited to an option to buy 100,000 shares of \$100 par stock to Washington National Airport, the two cities agreed.

Bakersfield, Calif.— The 130,000-acre Kern River Airport became fully operational last month.

Baton Rouge, La.— The 130,000-acre Baton Rouge airport became fully operational last month, is being prepared for passenger and cargo terminal accommodations.

Bethel, Conn.— The 130,000-acre Bethel-Toronto airport, located just west of the town, will open next week, but was expected to effect maximum traffic only during the summer months.

Binghamton, N. Y.— More than 2,000 passengers daily will be handled at the Ted Williams Airport, site of a fleet of scheduled airline craft.

Billings, Mont.— The 130,000-acre Billings airport became fully operational last month.

Boise, Idaho— The 130,000-acre Boise airport, site of a fleet of scheduled airline craft, will open next month.

Brownsville, Tex.— The 130,000-acre Brownsville airport, site of a fleet of scheduled airline craft, will open next month.

Canton, Ohio— The 130,000-acre Canton airport, site of a fleet of scheduled airline craft, will open next month.

air terminal to about four times its present size. Part of the cost would be covered by \$10,000 in Federal funds allocated.

Chicago—The 130,000-acre Chicago Municipal Airport at Kenosha City, Ill., the 130,000-acre Chicago airport and the 130,000-acre Kankakee City metropolitan area have been tied with the Kenosha City airport as the second largest in the nation for passengers to a calendar year of 1945. The Chicago area had 1,000,000 scheduled operations with Faribault area second by the scheduled aircraft movement to the public.

Detroit, Mich.— City will raise \$100,000 to help finance a 36-story airport terminal building, which may be completed in mid-1948. Funds will be used for maintenance, fueling, parking, and other building costs to locate 20 air terminals simultaneously.

Hartford, Conn.— Acquisition of ownership control of the city airport, previously managed by the Western Connecticut State College, is proposed as a result of the Class B bid. A public and civilian manager will be appointed to run the airport, which will be built to accommodate 20 medium bombers already authorized.

Kirkland, Wash.— Acquisition of ownership control of the city airport, previously managed by the Western Washington State College, is proposed as a result of the Class B bid. A public and civilian manager will be appointed to run the airport, which will be built to accommodate 20 medium bombers already authorized.

Portland, Ore.— Acquisition of ownership control of the city airport, previously managed by the Western Oregon State College, is proposed as a result of the Class B bid. A public and civilian manager will be appointed to run the airport, which will be built to accommodate 20 medium bombers already authorized.

Seattle, Wash.— City Council will consider a proposal to the Federal Transportation Department to build the Seattle airport north of the city as a municipal airport at a cost of \$100,000,000.

St. Louis, Mo.— The 130,000-acre St. Louis airport, site of a fleet of scheduled airline craft, will open next month.

Tampa, Fla.— The 130,000-acre Tampa airport, site of a fleet of scheduled airline craft, will open next month.

Toronto, Ont.— The 130,000-acre Toronto airport, site of a fleet of scheduled airline craft, will open next month.

Wichita, Kan.— The 130,000-acre Wichita airport, site of a fleet of scheduled airline craft, will open next month.

Wilkes-Barre, Pa.— The 130,000-acre Wilkes-Barre airport, site of a fleet of scheduled airline craft, will open next month.

Winnipeg, Manitoba— Within a year the city will begin construction of a new airport, 13 miles west of the city. The new airport will be built on land from Moose Lake, to cost over \$6,000,000.

The site will cover an area of almost 1,000 acres, and will be built on land which is now being cleared for the new airport.

Winston-Salem, N. C.— The 130,000-acre Winston-Salem airport, site of a fleet of scheduled airline craft, will open next month.

Worcester, Mass.— The 130,000-acre Worcester airport, site of a fleet of scheduled airline craft, will open next month.

Youngstown, Ohio— The 130,000-acre Youngstown airport, site of a fleet of scheduled airline craft, will open next month.

Zanesville, Ohio— The 130,000-acre Zanesville airport, site of a fleet of scheduled airline craft, will open next month.

WESTERN'S DENVER TERMINAL:

Pictures show exterior and interior views of Western Air Lines' terminal at Denver, a 130 x 20 ft. remodeled Quonset hut with a 60 x 120 ft. passenger waiting room in one end. Glass end is used for freight and other purposes. Cost of the project was about \$15,000. As eastern terminus of Western's route to Los Angeles, the Denver office handles about

330 passengers daily, against 300 a few months ago. Six flight desks cover the main lounge, carrying about 330. A seventh is designed only for baggage and equipment storage. The carrier decided the Quonset hut installation after it appeared that the growing passenger load would overtax the already congested terminal building at Denver Municipal Airport.

AIRCRAFT...

...AND PARTS

The War Assets Administration, as a disposal agency for government-owned surplus, has a large inventory of both planes and component parts. This stock-pile is being added to frequently by the Armed Forces as more and more aircraft and equipment is being declared surplus.

If you are interested in buying a plane or in

keeping your present plane flying, it will be to your advantage to keep W.A.A. in mind. Because our inventory is wholly dependent on those items declared surplus, we may not always have what you need. However, you are urged to send in your inquiry—you may like some prompt consideration.

We have available, from time to time, flyable planes in three general classifications. For instance:



LIAISON PRIMARY TRAINER PLANES

These aircraft are adaptable to private-plane ownership and many have long hours of pleasure or business flying still at the command of the buyer.



TRANSPORT PLANES

Individuals and companies engaged in air freight or passenger transportation have purchased a number of surplus planes which they have found suitable to their purposes.



ADVANCE TRAINER PLANES

These are generally twin-engine aircraft which can be converted to 3-place planes. They have great possibilities for executive or feeder-line transportation.

Non-superseded and non-profit institutions may acquire surplus aeronautical property at nominal prices for use in instruction and research. Write the Director, Educational Aircraft Division, Room 319, Annex 2, 425 Second Street, N. W., Washington 25, D. C.

Detailed information regarding the sale of aircraft can be obtained from any W.A.A. Regional Office.



TIRES

Both dealers and National Aircraft Components Sales Center have large stocks of tires and tubes in a variety of sizes, tread and cords at attractive prices.



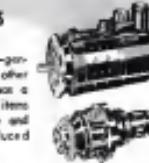
PROPELLERS

Airplane propellers in certain sizes and specifications can be purchased new. They are adaptable to aircraft ranging from light planes to transports.



INSTRUMENTS

W.A.A. has a quantity of precision aircraft instruments including altimeters, airspeed indicators, gyro horizon, etc., and a choice of different types of engine instruments.



MISCELLANEOUS EQUIPMENT

Do you need a starter—generator—wheels—or other accessories? W.A.A. has a large inventory of such items immediately available and at substantially reduced prices.

WAR ASSETS ADMINISTRATION

OFFICE OF AIRCRAFT DISPOSAL

425 SECOND STREET, N. W., WASHINGTON 25, D. C.

down at Rio Piedras, seven miles from the city. \$44,000,000 has been voted for the project.

Chile. Chile—Chilean Airlines' \$100 million fleet is to double in 10 years or more by 1960 and 80 aircraft by 1970. The airline is surveying opportunities for the city plan and construction. Development of new metropolitan areas, and expansion of the downtown area, also will be proposed. The airport plan to use land confiscated for public purposes is to be completed and then opened by the state government.

SHORTLINES

Americana top officials took a demonstration flight in April 20-21, 1946, privately to the 100-mile-long Lake Titicaca where the carrier has an order. On the trip were C. E. Smith, board chairman; Ralph Dawson, pres.; William Littlewood, vp engineering; and James H. Douglass, Jr., research and development. Mr. Smith was succeeded to A. M. Keay for his services as wartime president of the company.

Brazil executives, released from a South American tour, expressed the belief that Latin American governments will soon call all support ships for route expansion in South America. Eleven made the

survey trip. In preparation for the Latin American expansion, Brazil will expand its pilot personnel more than 20 percent by Jan. 1 with the addition of 30 new flying cadets.

Change & Southern revenue passenger rates for the first nine months of the year were 53 percent higher, for a total of 180,512,000, than the same period last year. Passengers numbered 267,000, against 184,077 the year before, an increase of 88 percent. A carrier flight from New Orleans to Havana over the route the line expects to open early next month carried 25 American press representatives, among them Robert Wood, AVIATION NEWS Ed.

Bolita carried its heaviest passenger load during September. The 54,021 summer passengers exceeded August's total by 1,024. The line carried 27,000 as far south as its service as wartime president of the company.

Brazil executives, released from a South American tour, expressed

the belief that Latin American governments will soon call all support



HEAVY PAYLOAD

Pearce shows one of two loads of express, each more than 30,000 lbs., carried recently by an American Airlines contract air cargo division. DC-6 between Rioverde, Vg., and LaGuardia Field American claims that each flight was the heaviest payload ever carried in this country by commercial airline. Utterly trucked, the express were shipped by us to catch a steamer bound for South American ports.

at Tampa. Company flew 220,000 lbs. of air express out of LaGuardia Field in September.

HLB Royal Dutch has put out twice as many Amsterdam-Toronto flights as the previous year. Previous totals were over the 3,000-mile route. Pilots stop at Bangkok enroute of night flights to Singapore and Colombo.

Hawaiian reports increases in travel to South Africa because of the pleasant hunting season. Juvenile literature has been added to MCA's plane reading racks.

Jamaican total operating revenues for the third quarter increased 20 percent over the second quarter. Net profit of \$38,500 after deduction of all charges compared with \$21,618 for the second quarter. A new express agency was set up in September, and 300 new flights in a total of 220,000 paid seats. Previous record of 200,000 in 224,000 paid seats makes 1946 the year of greatest success.

United, which recently added 100 to its cargo equipment fleet, began a new and unusual service. Carriers were 251 percent above the same month last year for a total of \$80,360. . . Company is leasing 60,000 sq ft of office space in the former Dodge plant at W. 34th St. and 10th Ave. New York, opposite site of the new Penn Station.

United is near 5000 general offices. Number of Chicago employees has grown to about 7,000 from 600 in late 1941, and 1,000 a year ago. United's entire fleet of 25 DC-4s is now in operation, after an 18-month conversion job. Total of twin- and 4-engine aircraft is 98 planes.

CAB ACTION

The Civil Aeronautics Board, Federal Power Commission, Bureau of Air Commerce, and the Interstate Commerce Commission should not create its own rules under the Civil Aeronautics Act, said General Manager, American Airlines, and General Counsel, American.

A standard code replaces State Rules, State Airlines vs. upholders' request.

CAB SCHEDULE

Oct. 16. Rules due in American-New Mexico rate case. (Board did not file a brief in the case.)

Oct. 17. General manager of American Airlines to serve Clarkfield, Vt.

Oct. 18. American's modified schedule. (Board did not file a brief in the case.)

Oct. 19. New rate schedule on 900-mile minimum fare between Newark and Boston.

Oct. 20. American's new rate schedule on 900-mile minimum fare between Newark and Boston.

Oct. 21. American's new rate schedule on 900-mile minimum fare between Newark and Boston.

Oct. 22. American's new rate schedule on 900-mile minimum fare between Newark and Boston.

Oct. 23. American's new rate schedule on 900-mile minimum fare between Newark and Boston.

Oct. 24. American's new rate schedule on 900-mile minimum fare between Newark and Boston.

Oct. 25. American's new rate schedule on 900-mile minimum fare between Newark and Boston.

Oct. 26. American's new rate schedule on 900-mile minimum fare between Newark and Boston.

Oct. 27. American's new rate schedule on 900-mile minimum fare between Newark and Boston.

Oct. 28. American's new rate schedule on 900-mile minimum fare between Newark and Boston.

Oct. 29. American's new rate schedule on 900-mile minimum fare between Newark and Boston.

Oct. 30. American's new rate schedule on 900-mile minimum fare between Newark and Boston.

Oct. 31. American's new rate schedule on 900-mile minimum fare between Newark and Boston.

Nov. 1. Hearing on 900-mile minimum fare between Newark and Boston.

Nov. 2. Hearings on 900-mile minimum fare between Newark and Boston.

Nov. 3. Hearings on 900-mile minimum fare between Newark and Boston.

Nov. 4. Hearings on 900-mile minimum fare between Newark and Boston.

Nov. 5. Hearings on 900-mile minimum fare between Newark and Boston.

Nov. 6. Hearings on 900-mile minimum fare between Newark and Boston.

Nov. 7. Hearings on 900-mile minimum fare between Newark and Boston.

Nov. 8. Hearings on 900-mile minimum fare between Newark and Boston.

Nov. 9. Hearings on 900-mile minimum fare between Newark and Boston.

Nov. 10. Hearings on 900-mile minimum fare between Newark and Boston.

Nov. 11. Hearings on 900-mile minimum fare between Newark and Boston.

Nov. 12. Hearings on 900-mile minimum fare between Newark and Boston.

Nov. 13. Hearings on 900-mile minimum fare between Newark and Boston.

Nov. 14. Hearings on 900-mile minimum fare between Newark and Boston.

Nov. 15. Hearings on 900-mile minimum fare between Newark and Boston.

that proposed in the Board's show cause order of last July (AVIATION NEWS, July 29).

Airlines Levy No Show Charge of 35% on Tickets

The nation's domestic airlines placed in effect this month a service charge of 35 percent on tickets not purchased by direct telephone. The plan represents the second phase of a program designed to provide more airline seats by alleviating the "no show" problem.

Passengers not intending to use their tickets may avoid the service charge by informing the airlines either in person, by telephone, telegram or mail—providing the information reaches the airline office in the city from which the passenger was to make prior to flight time. First phase of the airline's "no show" attack on the "no-show" problem will continue in August. At that time, passengers will be required to inform the airline office a specified number of hours prior to departure of their intention to use the reservations previously made. Failure to do so results in cancellation of the reservations.



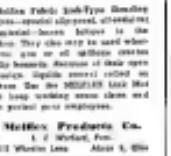
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Experienced AERODYNAMISTS and AERO-DYNAMICS ENGINEERS are needed now.

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MELFLEX Standing Mats

CAB has set a temporary mail rule of 75 cents a ton mile for TWA's North Atlantic route pending availability of sufficient data as to which to base a permanent rule. The 75-cent figure is the same as

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BOEING MODEL 247A SPECIAL FOR SALE



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1 Propeller—2000 RPM

Gas Capacity—300 Gallons

(5 Hour Cruise Power)

Interior—10 passengers

Exterior—10 passengers

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A Courageous Pilot

A NEW men before CAB Chairman Landis called pilot error the major factor in airtime crashes, Capt. Leonard H. Smith conceded personal responsibility for the crash of a United Air Lines DC-4 at Chayenne. In his deposition at a CAB hearing he said the aircraft probably lost altitude when he glanced away from the instruments while circling to land. Characteristically, he cleared his co-pilot.

CAB safety officers believe Capt. Smith's courage is unprecedented in airline accident history. His statement will save the government thousands of dollars in hearings, material costs, CAB and airlines executives' time, and legal fees. The hearings might well have ended in no ascertainable cause. Another public announcement might have been made that the most experienced technical investigation in the country had failed to solve the mystery. The public can understand and has a certain tolerance for weather and unpreventable mechanical malfunctioning. But unresolved accidents linger in memory and build up

doubt in all air transportation. Mysterious accidents are probably the air transport industry's most vicious enemy because there is no assurance that other accidents due to the same strange causes will not occur at any time.

Captain Smith cannot be praised for negligence, and has ready honesty persists a costly problem to his employers who must determine his future without disengaging other pilots from similar honesty. Nor can United permit the public to believe that a careless pilot is permitted to continue flying. Nevertheless, it is a safe prediction that by turning the spotlight of responsibility in this case to the cockpit he has warned other pilots of the danger of repeating his error, and has contributed to the saving of life as materially as any number of safety engineers who design our airliners. The statement took special courage in light of the Air Line Pilot Association's current industry-wide struggle for salaries, up to \$4,250, a campaign for which the public has so little sympathy.

Must There Be A Lightplane Slump?

A NEW rumour the Midwest leaves little doubt that the time has come to start energetic efforts to sell lightplanes. The buyers market is disappearing. One well known manufacturer has frozen his production rate considerably below his capacity. An advertisement by an Oklahoma City distributor of another make of plane announced the arrival of a fleet of some 38 new ships for immediate delivery. Scores of still another well known craft are sitting about the country unused. A few other companies like Piper and Cessna are still behind demand, but their dealers are not lulled into inactivity by this fact.

Reservoirs of fixed base operators at the National

Aviation Clinic were characteristic. They varied from extreme pessimism about the long term future of private aircraft sales to continued optimism. From here on we might as well expect to see press announcements on the future which will be widely divergent. The individual enthusiasts and forecasters will make interesting reading, and AVIATION NEWS will report them. But when it is all boiled down, the future—as in any other industry—depends on quality of product and either of administration. Surprisingly few plane dealers will admit it.

ROBERT H. WEISS

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The new Stromberg® PS Series Injection Carburetor eliminates internal carburetor icing caused by the refrigerating effect of fuel vaporization. This important safety feature results from spraying the fuel into the air stream as it leaves the carburetor and enters the engine manifold, instead of the usual practice of discharging the fuel by means of jets within the carburetor. Other safety and performance factors of injection carburetors provide freedom from gravity effects in dives, climbs and banks, accurate predictability of fuel consumption, and automatic compensation for temperature and altitude effects.

Stromberg PS Series Carburetors are a light-plane adaptation

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It will pay you to look into the many performance and safety advantages of Stromberg Carburetors as original factory equipment for light planes. An interesting descriptive folder will be sent upon request.



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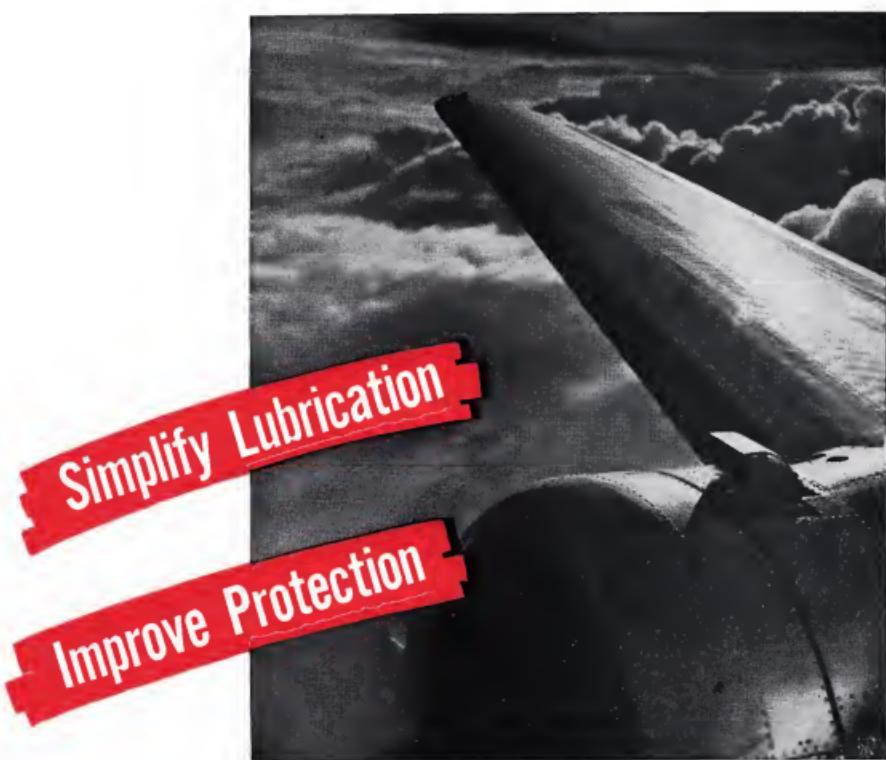
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